

## **PRESS RELEASE**

*Weinsberg, 21st August 2017*

Innovative VLEX 2-way robot for rail and road

### **Compact with a smart steering**

**With the newly developed VLEX road-rail robot, Vollert offers the finest solution for light shunting operation up to 300 tons: Extremely compact and flexible, battery-driven and exhaust-free, the small VLEX is suitable to change tracks fast in a very confined space.**

Shunting operations on secondary railway systems, traffic operations or port terminals pose time-consuming challenges - even more so, if these reach into closed storage or production areas. Rail-bound solutions alone are often not flexible enough. The new VLEX road-rail robot from Vollert quickly and easily changes from track to road - or straight to the power outlet as it has a battery-driven electric drive. "As a specialist for economical in-plant shunting and transport systems, we were always approached on the subject of a small 2-way, road-rail, solution, so we have been working on the development full-scale," explains Jürgen Schiemer, Vice President Shunting Systems at Vollert.

### **Articulated steering for maneuverability and flexibility**

Many shunting systems are clumsy or involve high wear and tear. The newly developed VLEX features a very special type of articulated steering. The radio-controlled road-rail robot is driven by four individually wheel hub motors. Steering takes place over the speed control of the wheels, so that we could do without the commonly used steering cylinders. It is compact and extremely flexible and thus an economical alternative to the stunting solutions available so far. The ingenious vehicle geometry - combined with the innovative steering control system - allows turning radiuses of 7.2 m that are gentle to the tires and low-wear. Also, a 360° turn on the spot is feasible, if space is very confined.

### **Bumpy ground and small obstacles – no problem**

One of the chassis axle is a swing axle. This ensures that all four drive wheels have always maximum contact with the ground during rail and road travel and exploit their full force. The vehicle, thus masters smaller obstacles as well as chuckholes without any loss of structural stability and traction even on load-bearing unpaved terrain. Track guide rollers are hydraulically lowered for rail travel. The hydraulic system also ensures that the track guiding units automatically readjust themselves and counterbalance each other. The steering can

be hydraulically locked for the required stability during travel. Solid rubber tires ensure optimum traction, which is also supported by the high dead weight of 4.5 tons. Thus, wagons of up to 300 tons can be moved.

### **Remote control with innovative color system**

The joystick remote control is particularly straightforward thanks to a novel color system: steering and travel direction as well as lowering the track rollers are operated intuitively and without the need for major training measures by means of color-coded buttons. The road-rail robot can be safely controlled under all operating conditions thanks to the high coverage range. In the majority of the European Union the radio frequency (433/434 MHz) is not subject to registration or approval. "With its high maneuverability, high traction and intelligent drive technology with a pulling force of 20 kN, the road-rail robot and can be employed in all shunting operations and is easily and safely operated by one person," says Jürgen Schiemer. "Another very important point: access to all relevant components as well as for battery replacement is possible through large gull-wing doors at any time. This makes maintaining the road-rail robot very easy."

### **About Vollert Anlagenbau GmbH**

As an innovator, Vollert Anlagenbau develops economical shunting systems for connecting and secondary railway systems. Since the 1950s, Vollert's fixed, cable-mounted shunting systems are used worldwide to shunt railroad cars and trains. Moreover Vollert delivers stand-alone shunting machines, heavy-duty transport trolleys and sliding platforms for reliable and efficient operations in refineries, mines, ports, steel and cement plants, explosion protection areas, train wash facilities and maintenance facilities.

Vollert's plant and machine solutions are deployed in more than 80 countries around the world with subsidiaries in Asia, Russia and South America supporting sales activities. 250 employees work at the company's headquarters. [www.vollert.de](http://www.vollert.de)

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**Image 1**  
Compact, flexible, battery-driven and exhaust-free: Vollert's innovative VLEX road-rail robot is the optimal solution for easy shunting operations of up to 300 tons on rail and road.



**Image 2**



**Image 3**  
The articulated steering is controlled by the speed control of the wheel hub motors with turning radiuses of only 7.2 m that are gentle to the tires and low-wear and even a 360° turn on the spot.



**Image 4**  
The vehicle masters smaller obstacles as well as chuckholes without any loss of structural stability and traction even on unpaved but load-bearing surfaces. The road-rail robot is versatile.



**Image 5**

The joystick remote control is operated intuitively and simply via color-coded buttons.



**Image 6**

Large gull-wing doors allow access to all important components as well as the battery replacement, which makes maintenance of the road-rail robot much easier.